

that of eggs of the preceding species, having hardly any gloss. It measures 0.61×0.50 inch.

50. *UROSPHENA SQUAMICEPS* Swinhoc.

One example of this little Bush-Warbler was shot near Kuatun and brought to me on the 17th April last. Length 4.35 inches.

[To be continued.]

XIV.—*Field-notes on Birds collected in the Philippine Islands in 1893-6.*—Part II. By JOHN WHITEHEAD.

[Continued from p. 111.]

c. *PASSERES* (Part II.).

80. *PHYLLOSCOPUS BOREALIS* (Blas.). (Grant, *Ibis*, 1894, pp. 408, 507; 1895, p. 443; 1896, pp. 113, 464.)

A common migrant from the north, dispersed over the Eastern Archipelago during the winter months. It has been obtained in most of the Philippine Islands, and doubtless occurs in those islands from which it has not yet been recorded.

81. *ACROCEPHALUS ORIENTALIS* (Temm. & Schl.). (Grant, *Ibis*, 1895, p. 443.)

Of this Chinese winter migrant a specimen was shot in Abra on 15th November. This Reed-Warbler has a very extensive range among the Philippines and Malay Archipelago during its migrations.

82. *LOCUSTELLA FASCIOLATA* (Gray). (Grant, *Ibis*, 1894, p. 408.)

This Grasshopper-Warbler is also a winter migrant to the Philippines, but, owing to its skulking habits, it is seldom observed, and has hitherto been recorded only from Luzon and Marinduque. My specimen was shot in a bamboo-thicket on Monte Arayat in December.

83. *LOCUSTELLA OCHOTENSIS* (Midd.). (Grant, *Ibis*, 1895, p. 465.)

Also a winter migrant met with by me on the Baco River,

in Mindoro: it frequented the coarse grass and reeds at the edge of the river, and seemed much more lively towards sunset, when I noticed several birds fly to and fro across the stream.

84. *LUSCINIOLA SEEBOHMI* Grant, *Ibis*, 1895, p. 443.

Of such a skulking dull-coloured little Warbler it would be impossible to write much. The unique specimen in the collection was obtained by mere chance by one of my collectors, at an altitude of 6000 feet in the highlands of Lepanto (North Luzon). It was shot in a thick patch of coarse grass, and my hunter was under the impression that he had secured the more common *Cettia seebohmi* until he brought the bird to me, when I made him aware of the treasure he had thus unwittingly obtained.

Iris brown; upper mandible dull black, lower greyish white; feet pale brown, soles greyish white.

85. *CETTIA SEEBOHMI* Grant, *Ibis*, 1894, p. 507; 1895, p. 444.

This small Warbler is by no means uncommon on the steep mountain-sides in Central North Luzon, where it is met with from 4000 to 7000 feet. It is a busy little bird, but seldom shows itself, frequenting the most tangled and overgrown spots it can find, from whence its sharp note, "chick chick," may often be heard. To pick these small birds out of a thick tangle without absolutely destroying them—even with a small collecting-gun—is often the work of an hour. At times the collector is obliged to retire, without being able to circumvent them.

Iris dark hazel; upper mandible black, lower mandible and feet flesh-colour.

86. *CETTIA CANTURIENS* (Swinh.). (Grant, *Ibis*, 1894, p. 508; 1895, p. 444.)

This is a rather common winter visitor in North Luzon, my specimens being obtained in the mountains, and one of them at an altitude of 5000 feet. In February I met with it on the banks of a small river, where it was fairly common in some willow-like bushes.

87. *GEOCICHLA VARIA* (Pall.). (Grant, Ibis, 1895, p. 445.)

I obtained my first specimens of White's Thrush in the highlands of Lepanto, at an altitude of between 6000 and 8000 feet. The bird is somewhat rare in the Luzon highlands, to which it is a winter migrant from China and Japan. As yet it has only been recorded from Luzon.

Iris black; upper mandible dark brown, lower greyish white; feet dull pinkish brown.

88. *TURDUS THOMASSONI* Seeböhm.

Merula thomassoni Grant, Ibis, 1894, p. 508; 1895, p. 445.

The resident Philippine Thrushes will doubtless prove to be the most interesting of highland forms in the whole group. At present I have only explored the mountain-regions of three of the principal islands—Luzon, Mindoro, and Negros. On the first two we find the highland ornithology nearly identical, *Stoparola*, *Muscicapula*, *Chlorura*, *Hyloterpe*, *Lanius*, and several other genera and species being common to the two islands; but two Blackbirds more distinct than those of Luzon and Mindoro it would be difficult to find. In Negros, again, the Blackbird is quite distinct from either, and doubtless most of those islands which have mountain-ranges of over 6000 feet will also possess their own peculiar species.

This handsome Blackbird was first obtained in Benguet; it was again met with in Lepanto, and was common on the summit of Monte Data. It frequents the thick stunted bush on the mountain-sides, where it finds the many berry-bearing shrubs on which it chiefly subsists.

♂. Iris dark brown; orbital skin, bill, and feet bright king's yellow; in the ♀ the yellow is duller.

89. *TURDUS OBSCURUS* Gmel. (Grant, Ibis, 1896, p. 545.)

Merula obscura (Gmel.). (Grant, Ibis, 1895, p. 445.)

A winter migrant to the Philippines, occurring in large flocks in the high mountains of Luzon and Negros; in the latter island it was plentiful as late as the 22nd April. This Thrush will doubtless be found to extend its migrations over

the whole of the Philippines, as it is very common further south, in the island of Borneo, during the northern winter.

90. *TURDUS CHRYSOLAUS* (Temm.).

Merula chrysolais (Temm.). (Grant, Ibis, 1895, p. 445.)

A few specimens of this Thrush were met with on the summit of Monte Data mingling with flocks of *T. obscurus*. This migrant from Japan and Siberia has hitherto been recorded only from Luzon.

Iris dark brown; bill brown, edged with yellow; legs pinkish brown.

91. *TURDUS MINDORENSIS* Grant, Ibis, 1896, p. 465.

This Blackbird is common on Monte Dulungan in Mindoro, after an altitude of 4000 feet is passed, and is probably found as high as 8000 feet, which is about the approximate height of this mountain. The highest point reached by me was 6000 feet, where the species was still to be met with. It frequented the thick dark forest in this rainy region. At the time of our visit (November) many of the young were moulting to their adult plumage. I have now met with Blackbirds in several tropical islands, but though the species bear little resemblance to each other when adult, the habits of those species found in Java, Borneo, and the Philippines differ little from those of our well-known garden-friend.

Iris dark-brown; orbital skin greenish yellow; bill king's yellow; legs in front yellowish brown, the back, soles of the feet, and scale-joints being bright yellow.

92. *TURDUS NIGRORUM* Grant, Ibis, 1896, p. 544.

This dull, uniformly-plumaged *Turdus* was met with near the summit of Canloön volcano, where it was not uncommon. In the month of April we found a nest containing two eggs, which are beautifully figured in this journal (1898, pl. v. figs. 8 & 9). We also found another nest later on in the month containing young, and obtained fully-fledged young during the same month.

Iris dark brown; orbital skin bright sulphur-yellow; bill bright yellow; feet yellow.

93. *CALLIOPE CAMTSCHATKENSIS* (Gmel.). (Grant, *Ibis*, 1894, p. 508; 1895, p. 445.)

This beautiful migrant from the north is common in the highlands of Luzon, being met with from the coast-line up to the summit of the highest mountains. It is shy and easily alarmed, passing most of its time in the thick tangled growth, where pursuit is almost impossible. I have seen this species on the slopes of Monte Dulungan, in Mindoro, and in Negros (within a few yards) in a native garden. At Cape Engaño, in the month of May (30th), a female of this species flew into my tent and settled for a moment on one of my collecting-boxes: the birds were then migrating north, and were common in some low plants amongst the sea-drift. The natives call this bird "Kerin," a word which resembles its note, but it also has an alarm-cry, not unlike the croak of a frog. It is a frequenter in North Luzon of the overgrown banks of rocky streams, and is decidedly more active after sunset, flying about after dark, when its note "kerin" may be heard.

Iris and upper mandible dark brown, lower mandible and feet light brown.

94. *MONTICOLA SOLITARIUS* (P. L. S. Müller). (Grant, *Ibis*, 1894, p. 509.)

This species is a winter migrant to the Philippines, though it is possible that it may breed among the rocky mountains of North Luzon. It has been recorded from most of the Philippine Islands, and extends its winter wanderings much further south.

95. *HYSIPETES FUGENSIS* Grant, *Ibis*, 1896, p. 113.

This species was obtained on Fuga Island, to the north of Luzon, to which island we were blown by adverse winds one night in April, on our voyage to Cape Engaño. It was fairly common in the thick bush which fringes the shore of Fuga Island, and I was first attracted by its peculiar harsh note.

Iris hazel; bill dusky brown; legs of a paler dusky brown.

96. *IOLE EVERETTI* (Tweedd.). (Grant, Ibis, 1897, p. 228.)

Fairly common in the big forests of Samar and Leite. This is another Mindanao species not found north of Samar, nor does it extend its range to the Negros-Cebu group. (Cf. Ibis, 1898, p. 228.)

97. *IOLE PHILIPPENSIS* (Gmel.). (Grant, Ibis, 1894, p. 508; 1895, p. 445.)

One of the commonest birds in Luzon, frequenting the outskirts of forest and open places; it ranges up to the pine-forests at an altitude of nearly 6000 feet, and has a harsh and disagreeable note.

98. *IOLE GUIMARASENSIS* Steere. (Grant, Ibis, 1893, p. 546.)

A subspecies of the above, obtained in Negros.

99. *IOLE MINDORENSIS* Steere. (Grant, Ibis, 1896, p. 466.)

This species was obtained in Mindoro at an altitude of 4500 feet.

100. *POLIOLOPHUS UROSTICTUS* (Salvad.). (Grant, Ibis, 1895, p. 253; 1896, p. 116.)

Fairly common in parts of Luzon, but nowhere abundant. This Bulbul is found in or about the borders of old forest; it is a bird of the lowlands. The lemon-yellow eyelid adds much to the bird's beauty in life, but in dried skins it becomes black. This genus is apparently confined to the eastern islands of the archipelago, following the distribution of *Harpactes*, *Irena*, &c., from Cape Engaño to Basilan.

Iris dark brown; eye-wattle bright lemon-yellow; bill and feet black.

101. *PYCNONOTUS GOIAVIER* (Scop.). (Grant, Ibis, 1894, p. 408; 1895, pp. 253, 446; 1897, p. 228.)

A common and widely-distributed species, occurring throughout the entire group. This Bulbul is very closely allied to *P. analis* of Borneo—though it is one of the species that has not been met with in the Palawan group. In the mountains *P. goiavier* reaches an altitude of 3000 feet.

102. *IRENA CYANOASTRA* Vigors. (Grant, Ibis, 1896, p. 116.)

This handsome Blue-bird was met with in the thick forests of Cape Engaño. The Philippine *Irenæ* are more difficult to obtain than the species found in Borneo and Palawan, owing to their habit of keeping so much in the topmost branches of high forest-trees. The skin is also almost as tender as that of a Trogon, and a fall from the top of a forest-tree often entirely ruins the specimen. These birds are also easily alarmed and quickly disappear; so that, but for their peculiar call-note, one might tramp the forest in vain. This species was known to my hunter as the "Villiareyni."

The Palawan *Irena* (*I. tweeddalii*) is closely allied to *I. criniger* of Borneo, both in coloration and in having a differently-coloured female; but the upper and lower tail-coverts are short, like those of the Philippine species, not reaching to and often beyond the tail. The *Irenæ* are only found in the western Philippines—Luzon, Samar, Leite, and Mindanao.

Iris scarlet-lake; bill and feet black.

103. *IRENA ELLÆ* Steere. (Grant, Ibis, 1897, p. 228.)

Met with rarely in Samar, but in the mountains of North Leite the species was fairly common, frequenting at times even the lower growth; but unfortunately during the time of our visit all birds were in full moult and quite useless.

Iris lake-red; bill and feet black.

104. *BRACHYPTERYX POLIOGYNA* Grant, Ibis, 1895, p. 446, pl. xii. fig. 1.

During our first expedition to Benguet we did not meet with this species, owing to the want of suitable forest. In Lepanto we obtained specimens at from 6000 to 8000 feet in the oak-forests. In such forests the ground is fairly clear, affording the bird suitable hunting-grounds, but in the Benguet pine-forests the ground is covered with grass. This *Brachypteryx* was fairly plentiful on the table-topped summit of Monte Data, but it was difficult to obtain. It is partial to the vicinity of small streams, and the male is a beautiful

songster; the song is short and is heard chiefly towards the break and close of day. *B. poliogyna* also occurs in the highlands of Mindoro and was obtained in the thick forests at 6000 feet.

Iris and bill black; feet dark brown.

105. BRACHYPTERYX BRUNNEICEPS Grant, *Ibis*, 1896, p. 547.

This is the Negros form of the last species, the males differing slightly, but the females are sufficiently distinct from Luzon and Mindoro specimens. The Negros Shortwing was met with on the great active volcano of Canloön, inhabiting the forest just below the bare cone. There were several birds in the vicinity of our camp, but we never succeeded in shooting one, though we started daily in pursuit of them, as they were singing every few hours, beside the small rivulets which flow from the sides of the mountain. To shoot a *Brachypteryx* we found to be no easy matter, and many a time has the writer unsuccessfully tracked the little songster through the undergrowth, the dark colour of the birds making them quite invisible in the forest-shade. Though the Philippine *Brachypteryx* is notable for its extreme shyness, the Bornean species was especially remarkable for its tameness, hopping about one's very feet.

Iris dark brown; bill and feet black.

106. CHIMARRHORNIS BICOLOR Grant, *Ibis*, 1894, p. 509, pl. xv. fig. 2; 1895, p. 446.

Our first specimen was obtained among some huge boulders in a mountain-torrent in Benguet. I remember the morning well; the sun had barely risen, my tyro of a collector—one Sebastian—had started off in front of me down stream, when bang went his gun and three small birds came flying over the big boulders up stream. I merely remarked to myself, "That ass Sebastian again!" and went on to the pine-forests alone. In the afternoon Sebastian brought in this beautiful Water-Redstart, but it was shot in the back so that I could not ascertain the sex. We obtained no more specimens until the highlands of Lepanto were reached, where, at

an altitude of 5000 feet, we met with several, including the female, which is quite different in colour to the male.

Iris brown; bill black; feet brown.

107. *COPSYCHUS MINDANENSIS* (Gmel.). (Grant, *Ibis*, 1895, p. 448; 1896, p. 547.)

This Magpie-Robin is of wide distribution in the Philippines, being recorded from most of the islands; but I do not think it is so numerous as are the species found in Borneo and the Malay Straits in their respective countries. Like other members of the genus, the Philippine *Copsychus* delights in the vicinity of native villages, being seldom observed in or near forests.

108. *CITTOCINCLA LUZONIENSIS* (Kittl.). (Grant, *Ibis*, 1894, p. 408; 1895, pp. 254, 447; 1896, p. 116.)

Is fairly common in the thick lowland forests of Luzon, and at times reaches considerable elevations. I noticed a pair near the summit of Monte Arayat at an altitude of over 3000 feet. In the forests of Cape Engaño I was fortunate in finding two nests. The first was placed in a rotten, hollowed-out palm-stem, at a considerable distance from the entrance, and contained two hard-set eggs. The other was in a small stump, only a few inches from the ground, in a muddy forest-path, and contained two eggs, one of which is beautifully figured in this Journal (1898, pl. vi. fig. 4).

This species always seemed to be a wary bird and a frequenter of dark shady patches in the forests, where it is almost invisible, as it takes great care to keep its black back turned towards the enemy. It is very quick in its movements, and on the least alarm disappears into the sombre thickets. It was met with in Catanduanes; and this or an allied species, I have reason to believe, occurs on Monte Dulungan in Mindoro.

Iris dark brown; bill black; legs pinkish white.

109. *CITTOCINCLA NIGRORUM* Grant, *Ibis*, 1896, p. 547.

This species was observed in the high dark forests about the base of Canloön, in Negros. The males of this genus are sufficiently difficult to shoot, but the females are more so;

and only four specimens of this species were secured, three of which were males. Though we were aware of their presence for weeks, it was only towards the end of our stay that the first bird was shot.

Iris and bill black ; feet pinkish white.

110. *MEGALURUS PALUSTRIS* (Horsf.). (Grant, Ibis, 1894, p. 510 ; 1895, pp. 254, 448.)

This species is common in Luzon in open marshy country : it was also met with up to 4000 feet in Benguet, frequenting the coarse high bamboo-grass, up the stems of which it works its way with a swinging side-to-side motion. When the top of the stem is reached (often stems of 8 or 9 feet), the bird sings its pleasant song, and shortly drops into the tangled grass-thicket, where its presence is made known by a few sharp notes uttered from time to time.

Iris light hazel ; the upper mandible brown and the lower dull white ; feet pinkish brown.

111. *MEGALURUS RUFICEPS* Tweedd. (Grant, Ibis, 1894, p. 510 ; 1895, p. 448.)

The Red-headed *Megalurus*—unlike the last species, which has a wide geographical range—is apparently confined to the Philippines, and is perhaps a more skulking bird in its habits than *M. palustris*, being often found in the most tangled patches which are met with here and there in high forest. In the Luzon highlands it was not uncommon at 5000 feet, frequenting the deep fern-and-grass-choked gullies on the mountain-sides. I also met with it at 5000 feet in Mindoro in thick bamboo-tangles in the oak-forests.

Iris hazel ; upper mandible black, lower white ; feet dull pinkish brown.

112. *ORTHOTOMUS FRONTALIS* Sharpe. (Grant, Ibis, 1897, p. 229.)

The Philippine Tailor-birds, of which no fewer than eight species have been described, are generally of skulking habits, being found in true forest and neglected clearings. In thick forests they frequent the bamboo-tangles and the carpet of big-leaved plants which cover the floor of many forests.

Orthotomus is difficult to obtain, as it is either too near to shoot or else keeps out of sight. The beautiful and well-known nests are placed in somewhat exposed positions; I have found them within a foot of the ground on the edge of a native path, and once on a small broad-leaved plant growing on a tiny island in a small stream. This species we obtained in Samar and Leite, in the high forest, frequenting the forest-carpet mentioned.

Iris light brown; upper mandible brownish black, lower greyish pink; legs pinkish brown.

113. *ORTHOTOMUS DERBIANUS* Moore. (Grant, Ibis, 1894, p. 408; 1895, p. 254.)

This Tailor-bird is not rare in the forests and clearings of Central and South Luzon; it was common in the hemp-plantations of Albay, especially when the ground was well covered with ferns and other vegetation. This species also extends its range to the island of Catanduanes.

Iris bright hazel; bill brown; feet pinkish brown.

114. *ORTHOTOMUS CHLORONOTUS* Grant, Ibis, 1896, p. 117, pl. iii. fig. 1.

We obtained one specimen of this Tailor-bird in North Luzon at Cape Engaño, where doubtless it replaces *O. derbianus*.

115. *ORTHOTOMUS CASTANEICEPS* Walden. (Grant, Ibis, 1896, p. 549.)

Met with at the base of Canloön volcano, where it was not uncommon in the big forests.

Iris light brown; upper mandible pinkish brown, lower pinkish white; legs pinkish brown, lighter on the hinder parts.

116. *ORTHOTOMUS SAMARENSIS* Steere. (Grant, Ibis, 1897, p. 228.)

This is one of the shyest of birds, and, but for its vocal powers, would be most difficult to obtain. It frequents neglected clearings among the coarse grass and ferns, where it creeps and hops about in this undergrowth, seldom appearing

above the surface. My specimens were all males, which met their doom owing to their powerful and beautiful song, which was the only clue to their whereabouts. The female has never yet been obtained. That this Tailor-bird is a distinct form of the genus and not closely allied to the rest of the group is, I think, reasonably certain, as its different coloration and its powerful and beautiful song separate it from the rest of the genus.

Iris light brown; upper mandible dark brown, lower yellowish white; feet pinkish brown.

117. *PHYLLERGATES CINEREICOLLIS* Sharpe. (Grant, Ibis, 1894, p. 510; 1895, p. 448.)

This Kina Balu species was met with in Benguet at 6000 feet, frequenting the tangled masses of ferns and grass which choke the deep rain-cut gullies; on Monte Data at higher altitudes this bird was rare, only one specimen being obtained. The species may occur in Mindoro, but we failed to meet with it.

Iris dark brown; upper mandible black, lower mandible and feet yellowish flesh-colour.

118. *CISTICOLA CISTICOLA* (Temm.). (Grant, Ibis, 1894, p. 510.)

We obtained one specimen of this Fantailed Warbler in Benguet, at an altitude of 4000 feet, where doubtless further specimens might have been procured, but our time was so occupied with other work that we did not pay much attention to this species. *C. cisticola* is recorded from Mindanao and Bohol, and is common in Palawan.

Iris light hazel; bill brown; legs flesh-colour.

119. *CISTICOLA EXILIS* (Vig. & Horsf.). (Grant, Ibis, 1896, p. 117).

This Fantailed Warbler is both more common and more widely distributed over the Philippines than the last species, occurring in most of the islands; in Luzon it is plentiful on the lalang grass-covered hills.

Iris light brown; upper mandible brown, lower pinkish brown; feet yellowish pink.

120. *PSEUDOTHARRHALEUS CAUDATUS* Grant, Ibis, 1895, p. 448, pl. xiii.

The discovery of this interesting bird was made by me on the summit of Monte Data. Whether the bird is so scarce, or whether the difficulty of obtaining it is so great, I can only say that not more than three specimens were captured in the several months spent in the Luzon highlands. *P. caudatus* is allied to *Androphilus accentor* from Kina Balu, and perhaps both genera are not distantly related to *Accentor*. This species is a quiet, dull-coloured, creeping bird, frequenting the undergrowth in the oak-forests which clothe the summit of Monte Data.

Iris brown ; bill black ; feet brown.

121. *ZOSTERORNIS WHITEHEADI* Grant, Ibis, 1894, p. 510, pl. xv. fig. 1 ; 1895, p. 448.

During our first visit to Benguet we met with this species at from 4000 to 6000 feet, and again in the following year it was common in Lepanto. This *Zosterornis* frequents the thick tangled masses of high grass and small trees on the mountain-sides, and is also partial to small shrubs, though it is occasionally found in forests. It hunts the low growth in small parties, feeding on insects and fruits, and during its short flight from tree to tree the noise made by its wings is quite audible. *Z. whiteheadi* is perhaps confined to the western side of the great central cordillera of North Luzon.

Iris dark brown ; bill black ; legs olive-green.

122. *ZOSTERORNIS STRIATUS* Grant, Ibis, 1895, p. 110, pl. iv. fig. 1 ; 1896, p. 118.

This interesting and very distinct *Mixornis*-coloured member of the genus was first obtained in Isabella, a province of Central North Luzon. In habits it closely resembles *Z. whiteheadi*, frequenting the low growth and bamboo-tangles. It was also met with at Cape Engaño, so that its range is apparently along the eastern Cordillera of North Luzon.

Iris light brown ; bill black ; feet brownish green.

123. *ZOSTERORNIS NIGROCAPITATUS* (Steere). (Grant, Ibis, 1897, p. 232.)

The Black-capped *Zosterornis* is apparently confined to the islands of Samar and Leite, where it is fairly common. Unlike the last two species, this, as well as *Z. dennistouni* and *Z. pygmæus*, frequents the lower branches of trees in thick forest, through which they hunt in small parties. (Cf. Ibis, 1898, p. 232.)

124. *ZOSTERORNIS DENNISTOUNI* Grant, Ibis, 1896, p. 118, pl. iii. fig. 2.

The Golden-capped *Zosterornis* was obtained in the forests of Cape Engaño; it is closely allied to the last species and is of similar habits. This species probably ranges down the eastern Cordillera of Luzon, but its southern limit has yet to be ascertained.

Iris lake-red; bill black; legs greyish blue.

125. *ZOSTERORNIS PYGMÆUS* Grant, Ibis, 1897, p. 232, pl. vi. fig. 1.

This species is a somewhat aberrant form, having a square *Zosterops*-like tail, instead of the graduated tail of the other members of the genus, but its nasal opening, bill, and bicoloured eye doubtless place it close to *Z. nigrocapitatus*. In habits it is similar to the last two species, but it is a much rarer bird in the forests of Samar and Leite. (Cf. Ibis, 1898, p. 232.)

126. *MACRONUS MINDANENSIS* Steere. (Grant, Ibis, 1897, p. 231.)

Fairly common in the dark forests of Samar and Leite, where it frequents the tangles and low plants near the ground, among which it obtains its daily bread. A nest found in Samar contained three eggs, which hatched off in my room in a few hours. (Cf. Ibis, 1897, p. 231.)

127. *PTILOCICHLA MINUTA* B. & W. (Grant, Ibis, 1897, p. 230.)

This rare Timeliine bird was obtained in Samar and Leite, and seemed to be more abundant in the latter island, where

several specimens were obtained in the mountain-forests at an altitude of 1000 feet. This bird is, as might be expected, a frequenter of the ground and low growth. In Samar and Leite the forests are often thickly covered below with broad-leaved plants, making a secure retreat for *Ptilocichla*. In Leite we devoted several mornings to its pursuit, and bagged five adult specimens. Its note is a sharp "chick-chick." The birds have a distinct walk like some other Timelines. (*Cf.* Ibis, 1898, p. 231.)

128. *PARUS ELEGANS* LESS. (Grant, Ibis, 1894, pp. 408, 511; 1895, pp. 254, 449; 1896, pp. 467, 549.)

In those islands from which this pretty Titmouse has been recorded it is such a common bird that I should be inclined to doubt its existence in Samar and Leite, islands which have been visited by numerous collectors, and from which, according to Dr. Worcester, no fewer than 150 species are known. If the species does not occur in Samar, it is probably absent from Mindanao, though its presence in several of the Sulu Islands is interesting. The birds from the various islands are almost exactly the same, though several of my Negros specimens have a good deal more yellow on the back. In Luzon this Titmouse has a very extended range, being as common in the forests on the sea-coast as it is on the top of Monte Data at 8000 feet; in Mindoro and Negros it also ranges from the sea-level to the tops of the highest mountains. In the highlands of Luzon it joins the hunting-parties formed by many different genera of birds which search the pine-forests. Though I saw a pair evidently building a nest in February, I was unable to find one completed, and we never succeeded in taking the eggs.

Iris dark brown; bill black; feet lead-blue.

129. *PARUS SEMILARVATUS* (Salvad.). (Grant, Ibis, 1894, p. 408; 1895, p. 111; 1896, p. 119.)

This very distinct Titmouse is probably confined to Luzon, perhaps to the north and central districts of that island. In North Luzon we met with it at Cape Engaño and in Isabella, in Central Luzon on Monte Arayat; it seemed to be absent

from the provinces to the west of the great central cordillera. This Titmouse generally frequents the top of lofty forest-trees in pairs or families; it is therefore difficult to obtain.

130. *HYLOTERPE PHILIPPINENSIS* Walden. (Grant, Ibis, 1894, p. 409; 1895, p. 254; 1897, p. 234.)

This Bush-Shrike frequents the lower growth of big forest, where it is by no means uncommon. We obtained a nest and eggs in Samar; an excellent figure of the egg is given in this Journal (Ibis, 1898, pl. v. fig. 1), and the egg shows strong affinities to that of *Lanius*, to which genus *Hyloterpe* is doubtless allied. Its habits are perhaps more those of a Flycatcher than a Shrike, as it frequents the low growth in forests, never perching in the open as Shrikes do. A peculiar point in the distribution of this species is that, though it is recorded from Siquijor by Dr. Worcester, it is unknown from the Negros-Cebu group, and has not yet been recorded from Mindoro.

131. *HYLOTERPE WINCHELLI* B. & W. (Grant, Ibis, 1896, p. 549.)

Met with by us from the base to the limit of tree-growth on Canloön volcano; like the last species, it frequents the lower growth in old forest. This species belongs to the brown-backed members of the genus represented in Borneo, Palawan, and Sulu, so it is probably of Bornean origin.

Iris and bill black; feet greyish blue, with a pale pink tinge.

132. *HYLOTERPE ALBIVENTRIS* Grant, Ibis, 1894, p. 511; 1895, p. 449; 1896, p. 467.

This species was met by us in the mountain districts of North Luzon, ranging from the stunted forests at an elevation of 500 feet in Abra up to the pines and oaks which cover the mountain-tops at 8000 feet. In the highlands it helps to swell the miscellaneous flocks of insectivorous birds which hunt the pine-forest. This species was also fairly common in the Mindoro highlands at 4500 feet.

Iris dark brown; bill black; feet lead-blue.

133. *LANIUS LUCIONENSIS* Linn. (Grant, *Ibis*, 1894, p. 512; 1896, p. 119.)

A common and widely-distributed species in the Philippines, frequenting open country and native gardens.

134. *LANIUS NASUTUS* Scop. (Grant, *Ibis*, 1894, p. 512; 1895, p. 450.)

Common in Luzon, the only essential to its distribution being open country. Its habits are those of a true Shrike: it likes to perch on the top of some bush, from which it can obtain a good look-out for its prey. This species was common in the mountains of North Luzon up to 6000 feet.

Iris, bill, and feet black.

135. *LANIUS VALIDIROSTRIS* Grant, *Ibis*, 1894, p. 512; 1895, p. 450.

This Shrike, though found inhabiting the same districts as the last species, differs from it entirely in its habits. It frequents the oak- and pine-forests in North Luzon from 4000 to nearly 8000 feet, and in these forests it is somewhat rare. We again discovered the species in Mindoro at 5000 feet on Monte Dulungan in similar forest.

Iris dark brown; bill black, base of lower mandible pinkish; feet black.

136. *RHABDORNIS MYSTACALIS* (Temm.). (Grant, *Ibis*, 1894, p. 409; 1895, pp. 256, 450; 1896, p. 119.)

The first time I met with *Rhabdornis* was on Monte Arayat, and at the time I considered it to be an aberrant form of *Arachnothera*. This idea was rather strengthened by further observation, for in Isabella I noticed the bird feeding and reaching forward among flowers, much as *Arachnothera* does. In Negros, however, one of my hunters gave me the unsolicited information that a bird he had shot was building a nest in the hole of a tree; on the following day his companion pointed the place out to me, and I have every reason to believe that these men were telling the truth. The importance of this information was great, as it would place *Rhabdornis* in the position assigned to it by Dr. Gadow,

namely, among the Creepers. The tongue is brush-tipped, after the manner of insectivorous birds which feed among flowers.

This Flower-Creeper is fairly common in Luzon, where it frequents true forest; the same species occurs in the Negros group of islands, but as yet no member of the genus has been recorded from Mindoro. The next species takes its place in the Samar-Mindanao group.

137. *RHABDORNIS MINOR* Grant, Ibis, 1897, p. 234.

Occasionally met with in the forests of Samar and Leite; in habits it resembles *R. mystacalis*. *R. minor* is also known from Mindanao. (Cf. Ibis, 1897, p. 235.)

138. *RHABDORNIS INORNATUS* Grant, Ibis, 1897, p. 235, pl. vi. fig. 2.

Though constantly on the look-out for this bird, we obtained only three males in almost as many months. This species inhabits the same forests as *R. minor* in Samar; we did not obtain it in Leite, where it doubtless occurs. (Cf. Ibis, 1897, p. 235.)

139. *DENDROPHILA AENOCHLAMYS* Sharpe. (Grant, Ibis, 1896, p. 550.)

Fairly common in the forests at the base of Canloön volcano, Negros, and ascending that mountain as far as the trees grow, which is to over 6000 feet, the birds from the various elevations being similar in plumage.

Iris straw-yellow; orbital skin on bill greenish gamboge-yellow, but the bill of a greener tint and tipped with brown; feet dark olive-green.

140. *DENDROPHILA MESOLEUCA* Grant, Ibis, 1894, p. 512; 1895, pp. 111, 450, pl. iv. fig. 2; 1896, p. 119.

Common in the mountains of North Luzon, being found up to 8000 feet on Monte Data. A series from Luzon shows us that birds collected on the coast cannot be distinguished from *D. aenochlamys*; that specimens collected at 1000 feet can hardly be separated from that species, and that they become *D. mesoleuca* in the highlands at an altitude of 5000 or 6000 feet; while those collected still higher at 8000 feet

are almost white on the underside, and have the white streak on the mantle very distinct. Mr. Grant believes these differences in Luzon birds to be due to age, the most adult birds being the whitest ; but I do not think that he would have described the coast-birds as immature if he had not first seen and described the highland specimens.

In my opinion this difference of coloration is entirely due to altitude, and coast-birds, be they ever so old, would never become white. This is a most interesting instance of colour-evolution, as the intermediate steps are not wanting in which *D. aenochlamys* of the Luzon coast-districts becomes *D. mesoleuca* as it reaches higher altitudes.

That the Negros Nuthatches show no change in plumage as they reach higher elevations is not so strange as it may at first seem. In Negros the mountains form a volcanic backbone of less than 7000 feet ; while in Luzon we find highlands of greater area than the entire island of Negros, of much greater altitude, and of apparently greater antiquity, isolated from the coast by barren ranges of grass-covered hills to the west, and to the east and south by broad, treeless, grass-covered plains, thus assisting to isolate the highland forms. The Negros Nuthatches might go up and down these mountain-sides in a day without ever quitting the forests, and therefore none of the birds gain distinctive coloration through lengthened isolation at high elevations.

Iris straw-yellow ; orbital skin and bill greenish yellow ; feet olive-green.

141. *DENDROPHILA LILACEA* Whitehead.

Dendrophila aenochlamys Grant, Ibis, 1897, p. 235.

Dendrophila lilacea Whitehead, Bull. B. O. C. vi. p. xlix.

I described the specimens of *Dendrophila* collected by me in Samar and Leite under the name of *D. lilacea*, as they are quite distinct in the coloration of the underparts from the birds collected in Negros, being of a bright glossy lilac, perhaps nearer *D. corallipes* of Borneo. *D. lilacea* occurs also in Basilan, but I have not seen any examples from Mindanao. (Cf. Ibis, 1897, p. 451.)

142. *ÆTHOPYGA MAGNIFICA* Sharpe. (Grant, *Ibis*, 1896, p. 551.)

This handsome Sun-bird was fairly common about the base of Canloön, where it frequents the edges of the forest. I was fortunate in watching a pair building their nest among some forest-drift and creepers at the foot of a huge forest-tree, only some three feet from the ground; it contained three terra-cotta-coloured eggs on 15th April (*Ibis*, 1898, pl. v. figs. 5 and 6).

Iris black; upper mandible and nostrils dark brown, red towards the tip, lower mandible dull pinkish yellow, yellower at the base; feet brownish black.

143. *ÆTHOPYGA BELLA* Tweedd. (Grant, *Ibis*, 1897, p. 236.)

Scarce in Samar, frequenting the forests and their outskirts. On 19th July we found a nest dangling at the end of a briar in an open locality. The egg is figured in the '*Ibis*' for 1898, pl. v. fig. 10.

144. *ÆTHOPYGA FLAVIPECTUS* Grant, *Ibis*, 1894, p. 513; 1895, p. 111, pl. v. fig. 1; 1896, p. 467.

Several males of this Sun-bird were obtained at an altitude of 3000 feet in Benguet. We met with the species again on the slopes of Monte Dulungan in Mindoro at 4500 feet, but it was here somewhat rare; the female was also obtained for the first time.

145. *EUDREPANIS PULCHERRIMA* Sharpe. (Grant, *Ibis*, 1897, p. 236.)

Met with in Samar and Leite. In Samar a nest with eggs was taken on the 26th June. (*Cf.* *Ibis*, 1898, p. 242.)

146. *EUDREPANIS JEFFERYI* Grant, *Ibis*, 1894, p. 513; 1895, pp. 111, 451, pl. v. fig. 2.

This species was met with in Benguet at nearly 5000 feet. In Lepanto it was also obtained as high as 7500 feet, where it was partial to some scarlet tube-formed flowers, which were searched busily for insects. A nest was in course of construction in the low forest about the middle of February,

but unfortunately was soon forsaken; it was of the usual Honey-sucker form and composed of green moss.

Iris brick-red; bill and feet black.

147. *CINNYRIS JUGULARIS* (Linn.). (Grant, *Ibis*, 1895, pp. 255, 451.)

Cinnyris obscurior Grant, *Ibis*, 1894, p. 514.

This Honey-sucker is widely distributed throughout the Philippines. It prefers coast-districts, and is especially fond of coconut-palms. We met with the species as high as 3000 feet in Benguet.

Iris dark brown; bill and feet black.

148. *CINNYRIS FLAGRANS* (Oust.).

Cinnyris excellens Grant, *Ibis*, 1895, p. 255; 1896, p. 120.

This handsome little bird is fairly common in Albay and in the neighbouring island of Catanduanes; it ranges up the east coast of Luzon, being met with as far north as Cape Engaño. Like the last species, it is partial to coconut-palms, finding its food among the flowers.

Iris, bill, and feet black.

149. *CINNYRIS SPERATA* (Linn.). (Grant, *Ibis*, 1895, p. 254; 1896, p. 468; 1897, p. 237.)

A widely-distributed species, ranging over the entire archipelago and also into Palawan; but in North Luzon its place is taken by the next species.

150. *CINNYRIS WHITEHEADI* Grant, *Ibis*, 1894, p. 514, pl. xiv. fig. 1; 1895, p. 451; 1896, p. 120.

Common among the highlands of Luzon, attaining an elevation of 5000 feet; it was also common on the coast at Cape Engaño, and thus it is spread over the entire north of Luzon.

Iris dark hazel; bill and feet black.

151. *ARACHNOTHERA FLAMMIFERA* Tweed. (Grant, *Ibis*, 1897, p. 238.)

Somewhat scarce in the forests of Samar and Leite. (*Cf.* *Ibis*, 1897, p. 238.)

152. *ARACHNOTHERA PHILIPPINENSIS* (Steere). (Grant, Ibis, 1897, p. 237.)

Met with occasionally in the forests of Samar and Leite. (Cf. Ibis, 1897, p. 237.)

153. *ANTHOTHREPTES GRISEIGULARIS* Tweed. (Grant, Ibis, 1894, p. 111 ; 1895, p. 451 ; 1896, p. 120 ; 1897, p. 238.)

Met with in Samar and North Luzon, where the species is somewhat rare.

Iris brick-red ; bill black ; feet olive-brown.

154. *ZOSTEROPS MEYENI* Bonap. (Grant, Ibis, 1894, p. 515 ; 1895, p. 452.)

The genus *Zosterops* is well developed in the Philippines, there being no less than seven recognized species in the group, mostly very distinct from each other. The genus is perhaps most numerous in mountainous country, where it is to be met with as high as the vegetation is able to gain a foothold. In habits *Zosterops* is gregarious, passing through the tops of the trees in pursuit of its food in fairly large flocks ; it also at times frequents the low jungle in neglected clearings, when it is by no means shy, but perhaps rather inquisitive.

Z. meyeri was common in the highlands of Luzon, where it frequented the pine-forests in small flocks, mingled, perhaps, with eight or nine other species. I watched a pair taking their morning bath in the dew that had formed on a tree-fern one morning within a few feet. On 24th January we found a nest, containing two young ready to fly, on the summit of Monte Data.

Iris stone-grey ; bill at base lead-blue, tipped with black ; feet lead-blue.

155. *ZOSTEROPS SIQUIJORENSIS* B. & W. (Grant, Ibis, 1896, p. 551.)

This large Silver-eye was very common in the forest just below the bare cone of Canloön, at an altitude of 6000 feet ; it was very tame, especially towards evening, when it roosted in some thick cistus-like shrubs, near the ground. We discovered many old nests in these bushes, and two containing

young just hatched, on the 12th April, which were removed by vermin of some sort before they could fly.

Iris stone-grey ; upper mandible black, base of lower light blue ; feet greyish cobalt.

156. *ZOSTEROPS NIGRORUM* Tweedd. (Grant, Ibis, 1896, p. 553.)

Like the last species, this is also met with on Caulöön volcano, but does not ascend the mountain to any great altitude. This little bird is somewhat difficult to obtain, owing to the great height of the trees which it frequents.

Iris pale brown ; bill tipped with black ; base of bill and feet slate-blue.

157. *ZOSTEROPS BASILANICA* Steere. (Grant, Ibis, 1897, p. 238.)

That the Samar-Leite *Zosterops* should be the same species as that found in Mindoro and Basilan and several islands of the Sulu group is not surprising, considering the number of species common to all these islands. On Samar and Leite this species is fairly common.

158. *ZOSTEROPS LUZONICA* Grant, Ibis, 1895, p. 257 ; 1896, p. 120.

Our specimens of this Silver-eye were collected on and about the base of the Mayon volcano in South Luzon ; the birds were mostly in moult. This species is closely allied to *Z. aureiloris*, but is not nearly so brilliant in coloration. That two species of the same group of *Zosterops* should be met with in the island of Luzon is not to be wondered at, considering the size of the island and the height of its mountain-ranges. This species probably ranges up the east coast of Luzon, as it was obtained by us at Cape Engaño at the extreme north-east of the island.

Iris and upper mandible black ; lower mandible and feet lead-blue.

159. *ZOSTEROPS AUREILORIS* Grant, Ibis, 1895, p. 453 ; 1896, p. 468.

This brilliantly-coloured *Zosterops* is fairly numerous at

an altitude of 1000 feet in Abra, and it was not met with above this height in Luzon; but in Mindoro it was obtained at nearly 5000 feet. The area over which the species ranges is therefore bounded by the great central range of North Luzon to the east. That this species, together with over half a dozen other highland forms, should be found in Mindoro and Luzon, indicates that at some period the high mountain-ranges of Western Luzon and those of Mindoro must have been united.

Iris dark brown; upper mandible slate-blue, tipped with black; legs and half of the lower mandible lead-blue; soles of feet yellow.

160. *DICÆUM HÆMATOSTICTUM* (Sharpe). (Grant, Ibis, 1896, p. 553.)

Met with in Negros, at the base of Canloön volcano. A nest was taken on the 19th of March, containing one egg; the egg is of quite a different type to those laid by the next group of *Dicæums* (the yellow-breasted group), which lay a pure white egg. This nest is in the Museum and the egg is figured in this Journal (1898, pl. vi. fig. 2).

Iris dark brown; bill and feet black.

161. *DICÆUM RUBRIVENTER* Less. (Grant, Ibis, 1895, pp. 258, 453; 1896, p. 120; 1897, p. 238.)

This is a common species in Luzon, frequenting the edges of forests and open places, where it finds the small berry-bearing trees, on the fruit of which it chiefly subsists. The intestines of every *Dicæum* examined by me are very large compared with the size of the bird, the reason of this being apparently that the fruits are swallowed whole and the stones passed through the stomach. This species has a wide range in the Philippines, from the North of Luzon to Basilan on the east, and, curiously enough, occurring in Masbate and Cebu; in the latter island one would have expected *D. hæmatostictum* or Negros. I doubt if *D. retrocinctum* has ever been met with in Luzon, though the British Museum contains specimens labelled "Manila"; but in old days all birds were thus labelled, Manila being the place of export. This *Dicæum*

is the Mindoro species and it is improbable that it occurs out of that island.

162. *DICÆUM DORSALE* Sharpe. (Grant, *Ibis*, 1896, p. 553.)

This species was obtained in Negros, at the base of Canloön, where it frequented the forest and its borders.

Iris dark brown; bill and feet black.

163. *DICÆUM XANTHOPYGIUM* Tweedd. (Grant, *Ibis*, 1895, p. 452; 1896, p. 120.)

This was somewhat rare in North Luzon, but perhaps more plentiful at Cape Engaño.

Iris black; upper mandible and feet black, lower mandible at the base brownish yellow.

164. *DICÆUM CINEREIGULARE* Tweedd. (Grant, *Ibis*, 1897, p. 239.)

Common in Samar and Leite, where three nests were taken towards the end of July. The nest is composed on the outside of green moss, that of *D. hæmatostictum* of white lichen.

165. *DICÆUM EVERETTI* Tweedd. (Grant, *Ibis*, 1897, p. 239.)

D. everetti is quite an aberrant form of Philippine *Dicæum*, being brown on the back and whitish on the breast. In Samar I found a nest which was fastened to the stem of some parasitic ferns growing about 9 feet up on the trunk of a tree. The nest contained two young birds.

Iris light brown; bill and feet black.

166. *DICÆUM OBSCURUM* Grant, *Ibis*, 1894, p. 515.

This *Dicæum*, a rather large species of the genus, is wonderfully solid and heavy for its size. It frequented the mountain-sides in Benguet at an altitude of about 5000 feet, where it was feeding on some berry-bearing shrubs. In Benguet it was rare, and we did not meet with it in Lepanto.

Iris brown; bill dark brown; feet dull pinkish brown.

167. *DICÆUM PYGMÆUM* (Kittl.). (Grant, *Ibis*, 1894, p. 515; 1895, p. 453; 1897, p. 239.)

Widely spread over the Philippine Archipelago, occurring

also in Palawan and Balabac, but not yet recorded from Mindanao. In North Luzon it is common in the high mountains up to nearly 6000 feet, and in Lepanto we found a nest containing young birds on 14th February at nearly 5000 feet.

168. *DICAËUM LUZONIENSE* Grant, Ibis, 1894, p. 515 ; 1895, p. 453 ; 1897, p. 238.

This handsome species belongs to yet another group of the genus *Dicaeum* found in the Philippines, a group having either metallic blue or green backs, generally confined to high mountains. *D. luzoniense* was first obtained in Benguet, and again met with in Lepanto on the summit of Monte Data. A form was obtained in the mountains of Samar which was a trifle smaller than the Luzon specimens.

169. *PRIONOCHILUS OLIVACEUS* Tweedd. (Grant, Ibis, 1897, p. 239.)

Rare in Samar and Leite, only three specimens being obtained in the two expeditions.

Iris lake-red ; upper mandible and feet black ; lower mandible slate-blue.

170. *PRIONOCHILUS BICOLOR* Bourns & Wore.

Prionochilus inexpectatus Hartert. (Grant, Ibis, 1896, pp. 469, 553 ; 1897, p. 240.)

This bird was met with by us in Mindoro, Negros, Samar, and Leite, and *P. inexpectatus* Hartert, of Luzon and Mindoro, is probably the same species. It was first described by Messrs. Bourns and Worcester from Mindanao specimens. *P. bicolor* reaches an altitude of nearly 5000 feet in Mindoro, but in Samar and Negros our specimens were obtained in old forest at about 1000 feet.

Mindoro : Iris brown ; bill black ; feet brownish black (probably a young bird).

Samar : Iris pale vermilion ; bill and feet black.

171. *PIPRISOMA ÆRUGINOSUM* B. & W. (Grant, Ibis, 1895, p. 454.)

The only specimen obtained was shot in the Province of

Abra on our journey to the Lepanto highlands. It was obtained by a mere chance, the native who killed it being under the impression that he had wasted a shot on the common *Muscicapa griseisticta*, of which this species is a perfect mimic; it was a wonder that the Indian did not throw it away. This *Piprisoma*, I expect, is a rare bird and easily overlooked, but its range seems to extend over the whole archipelago. In Dr. Worcester's distribution table, Luzon, Mindoro, Cebu, and Mindanao are the islands given in which it has been obtained.

Iris light hazel; bill light slate-blue; feet dark lead-blue.

172. *COTILE SINENSIS* (Gray). (Grant, *Ibis*, 1895, p. 111.)

Fairly common on the large rivers of North Luzon. We observed numbers entering their nesting-holes in the high banks of the Abra river on our return from Lepanto in the middle of February. Perhaps this Sand-Martin does not range much south of Manila in the Philippines, as it has not been met with in any of the other islands.

173. *HIRUNDO GUTTURALIS* Scop. (Sharpe, *Cat. B.* x. p. 134.)

A winter migrant. Numbers were noticed going north at Cape Engaño on the 14th of May.

174. *HIRUNDO JAVANICA* Sparrm. (Grant, *Ibis*, 1894, p. 516; 1895, p. 258 and p. 455.)

A resident of wide distribution in the Philippines and throughout the Malay Archipelago. I once found a pair nesting on a small island in the sea off Cape Engaño, the nest being attached to a hollowed-out rock. The birds had eggs; this was on the 17th of May.

175. *HIRUNDO STRIOLATA* Boie. (Grant, *Ibis*, 1894, p. 516.)

In the mountains of Benguet, at an altitude of 5000 feet, this species was fairly common among some high rocks, where I have little doubt the birds noticed by me were building their nests. In Central North Luzon I noticed large flocks perching on the telegraph-wires which traverse

the open plains. I also saw a few birds, evidently migrating to China and the north, at Cape Engaño on the 14th of May.

176. *MOTACILLA OCULARIS* Swinhoe. (Sharpe, Cat. B. x. p. 497.)

I noticed a small flock of White Wagtails on my way up the Abra river on the evening of November the 8th, but as all my guns were packed up, I did not secure one. This and the next two species are northern winter migrants to the Philippines, and extend their migrations over most of the Malay Archipelago.

177. *MOTACILLA MELANOPE* Pall. (Grant, Ibis, 1895, p. 258; 1896, p. 469.)

Common during the winter months; found on the rocky mountain-streams of Monte Data at nearly 8000 feet.

178. *MOTACILLA FLAVA* Linn. (Grant, Ibis, 1895, p. 258.)

Common at Cape Engaño during the middle of May, when flocks of from 30 to 40 individuals were gathering together previous to their departure north, *vid* the Batanes Islands. I noticed that the birds generally rested about the shore during the day; while towards sunset the flock would rise high in the air, and after a good deal of twittering and circling round, would head directly for the north over the sea.

179. *ANTHUS MACULATUS* Hodgs. (Grant, Ibis, 1894, p. 516.)

Very common in the pine-forests of Benguet, at an altitude of 6000 feet, during the winter months. These Pipits generally frequented the ground in small flocks, and when alarmed flew into the pine-trees, on the branches of which they walked about with ease.

Iris dark brown; upper mandible brown; lower mandible and feet pinkish brown.

180. *ANTHUS GUSTAVI* Swinh. (Grant, Ibis, 1896, p. 554.)

Common in the forest at 7000 feet on Canloön volcano, Negros.

181. *ANTHUS CERVINUS* (Pall.). (Grant, *Ibis*, 1894, p. 516.)

A specimen in full moult was obtained in Benguet. This and the last two species are winter migrants to the Philippines, but the next species, *A. rufulus*, is, I am inclined to think, resident in the mountains.

182. *ANTHUS RUFULUS* Vieill. (Grant, *Ibis*, 1894, p. 516.)

This Pipit, unlike the last three species, is not met with in flocks in the Philippines, but singly or in pairs on the grass-covered mountainous districts of North Luzon, where doubtless it is resident, as in Java and other Malay islands. *A. rufulus* has been recorded from most of the islands in the archipelago.

183. *PASSER MONTANUS* Linn. (Sharpe, *Cat. B.* xii. p. 301.)

The Tree-Sparrow, I expect, has been introduced into the Philippines by the Chinese, being only at present known from the towns of Manila and Cebu, but doubtless its range will be rapidly extended. In the suburbs of Manila, when I first arrived, I only noticed some three pairs round about the Club-house, but before I left, three years later, it would not have been difficult to count over fifty Sparrows any day perched about the house. This Sparrow will probably be restricted in its distribution by that of bricks and mortar, as the small native leaf-houses are not suitable to its requirements, and nice cosy holes in trees are generally tenanted by most undesirable insects and reptiles in tropical lands.

184. *LOXIA LUZONIENSIS* Grant, *Ibis*, 1894, p. 516; 1895, p. 455.

The discovery of this Crossbill and the Bullfinch (*Pyrrhula leucogenys*) was doubtless the most interesting and unexpected success of my Philippine expedition. This small Crossbill is not rare when once the high mountains are reached, the pine-forests (*Pinus insularis*) being essential to its existence. The Philippine Crossbill begins to build towards the middle of December, and though we found several nests, we were unfortunately unable to secure the eggs. On the 20th of January, when camped out on Monte Data, one of my

servants brought in a female Crossbill, which, judging by the state of the breast, I thought to be a nesting-bird, so I went with him to the place where he shot it. After a fruitless search, which lasted two hours, I sent the boy away and lay down beneath the pines, enjoying the warm sun, watching some Tits (*Parus elegans*), which were singing and busily engaged picking about among the branches. Now and then the whistling pipe of the new Bullfinch was heard, and a few entered the fir-tree directly over my head; they did not touch the cones, but worked for their food among the young shoots. Presently the male Crossbill perched in a tree close by, but flew away into the forest again. As he did not return, I took a stroll to one of the waterfalls which tumble for ever from the summit of Data's most western side; here several butterflies were disporting themselves, among them a Red Admiral, almost identical with the British species. When I returned to my position, after waiting some ten minutes, the Crossbill entered the tree on which he had perched before and settled on the side of a lump of lichen. This I knew must be the nest, so when my boy returned I sent him up the tree, and he reported four youngsters nearly fully fledged. Before he left the nest two of these flew away, and were met by their parent and encouraged to fly still further.

I found a nest in Benguet which contained eggs, but it was on the end of a pine-bough which stretched over the mountain-side, and could not be reached.

Ad. Iris, bill, and feet dark brown.

Juv. Bill yellowish green; feet dull flesh-colour.

185. PYRRHULA LEUCOGENYS Grant, Ibis, 1895, p. 455, pl. xiv.

During my first expedition to the highlands of Benguet I failed to meet with this interesting Bullfinch, the reason being the absence of the oak-forests, in which doubtless are the berry-bearing shrubs on which it feeds. Later on I found it fairly common on the summit of Monte Data: it was generally met with in small families of five or six, the young birds having almost changed into their adult plumage,

a few brown feathers on the head being the only sign of immaturity. We left the mountain in February, doubtless before the nesting-time, which would be most likely in April, when the weather is milder in these mountains. The note of the Philippine Bullfinch is the same weak piping whistle as the note of the British species.

Iris black; bill black at tip, base whitish blue or dull yellowish white; feet brownish pink.

186. *EMBERIZA SPODOCEPHALA* (Pall.). (Grant, *Ibis*, 1895, p. 258.)

The only specimen of this Bunting known from the Philippines was shot in Catanduanes, to which island it is a winter migrant from the north, like the next two species.

187. *EMBERIZA FUSILLA* Pall. (Grant, *Ibis*, 1894, p. 517.)

A male in moult was obtained for the first time in the Philippines in Benguet, at an altitude of 4000 feet.

188. *EMBERIZA SULPHURATA* Temm. & Schl. (Grant, *Ibis*, 1894, p. 517.)

One specimen shot in a pine-forest in Benguet, at 6000 feet. This Bunting is also an addition to the Philippine avifauna.

189. *ARTAMUS LEUCOGASTER* (Wagl.). (Grant, *Ibis*, 1895, p. 258; 1896, p. 554; 1897, p. 240.)

This Swallow-Shrike is common throughout the Philippines, wherever the country is sufficiently cleared of trees. It frequents dead standing timber in small parties, and as many as five may generally be seen together—the three young and the adult pair. It is most affectionate to its own species, sitting closely huddled together on the bare tree-tops, but wages incessant warfare on all other birds that come within range: the larger the enemy the more valiant does this small bird become. Its nest and eggs are so Shrike-like that I agree with Dr. Sharpe in placing the genus *Artamus* near the Laniidæ.

190. *ACRIDOTHERES CRISTATELLUS* (Gmel.). (Sharpe, Cat. B. xiii. p. 92.)

A species imported by one of the Governors-General of the Philippines, for the purpose of destroying locusts. At present this Starling has not spread beyond the neighbourhood of Manila, where it is known as the "Martinez" (the Governor's name) by the Indians.

191. *SARCOPS CALVUS* (Linn.). (Grant, Ibis, 1894, p. 517; 1895, p. 258 and p. 456; 1896, p. 469 and p. 554; 1897, p. 240.)

Quite one of the ornithological features of the Philippines. Like the Great Hornbill, this species has also been noticed by the Spaniards, and is known to them as the "Collato." It is supposed to learn to imitate the human voice, and for that reason it is often kept in a cage.

The Collato is a busy, lively bird, being found in numbers in the forests when its favourite fruit is ripe. It is also very partial to dead tree-trunks, nesting and roosting in the numerous Woodpeckers' borings. The noise made by the wings during flight is very audible. In Samar a pair were very busy prospecting some old posts within a few feet of our house, but we left before they had commenced to build. The note is a peculiar click, metallic but not displeasing. The species reaches an elevation of 3000 feet in Benguet.

192. *CALORNIS PANAYENSIS* (Scop.). (Grant, Ibis, 1895, p. 260 and p. 456.)

Found throughout the entire archipelago. More plentiful in the plantations and open districts, but visiting certain fruit-bearing forest-trees in large flocks. The species nests and roosts in the old tree-trunks which are bored by Woodpeckers; it is also very partial to dove-cots, filling up the boxes with grass and other nesting-materials, eggs and young in all stages being met with at the same time.

Iris vermilion; bill and feet black.

193. *MUNIA JAGORI* Cabanis. (Grant, Ibis, 1896, p. 554.)

Common and dispersed throughout the entire group; here, as elsewhere, a pest to rice-growers, frequenting the paddi-fields in large numbers.

Iris brown; bill almost white, with a bluish tinge; feet dull cobalt.

194. *MUNIA FORMOSANA* Swinh. (Grant, *Ibis*, 1895, p. 112.)

This Formosan species is apparently confined to the valley of the Rio Grande, in North Luzon.

Iris lake-red; bill and feet whitish blue.

195. *MUNIA CABANISI* Sharpe. (Grant, *Ibis*, 1895, p. 456.)

A very local species, only met with by us in the dried-up bed of the Rio del Abra, where it was feeding on the grass-seeds.

196. *UROLONCHA EVERETTI* (Tweedd.). (Grant, *Ibis*, 1895, p. 261; 1896, p. 555; 1897, p. 240.)

Though widely distributed in the Philippine Islands, this little Finch is never abundant, and is not met with in large flocks like *Munia jagori*.

Iris lake-brown; upper mandible black, lower whitish blue; feet dull cobalt-blue.

197. *CHLORURA BRUNNEIVENTRIS* Grant, *Ibis*, 1894, p. 518; 1895, p. 456; 1896, p. 470.

These small Bamboo-Sparrows are always difficult to obtain; being wary and of swift flight, they disappear in a second when alarmed. Amongst the bamboo-flowers (on which they feed) their movements are very slow and quiet, and it is only after one has found a number of bamboo-clumps in full flower, by carefully hiding and watching the flowers, that any success is obtained. My first specimens were collected in Benguet at an elevation of only 2000 feet, and we next met with the species again at 7600 feet on Monte Data, when a single specimen was secured. In Mindoro I shot a *Chlorura* in a pine-tree close to my camp, and noticed another some days previously feeding at the end of a pine-branch; this was at an elevation of 4500 feet. The note, which seems only to be uttered when the bird is on the wing, is "tsit, tsit," and is a somewhat hissing sound.

Iris dark brown; bill black; feet flesh-colour.

198. *ALAUDA GULGULA* Frankl. (Grant, Ibis, 1895, p. 112.)

We found this species fairly common on some open grass-plains in Isabella, where it was nesting. Two nests were found under some grass-tufts, with eggs, on the 25th of May.

199. *MIRAFRA PHILIPPINENSIS* Wardlaw-Ramsay. (Grant, Ibis, 1894, p. 518.)

Scarce in Luzon. In Benguet I obtained a specimen at 4000 feet on a large semi-cultivated plain. I also noticed a few birds on the plains bordering the Rio Grande in North Luzon.

200. *PITTA ERYTHROGASTRA* Temm. (Grant, Ibis, 1896, pp. 121, 470, 555; 1897, p. 240.)

Distributed throughout the Philippine group; also met with in Palawan and Balabac. This *Pitta* is more common in the belts of forest on the sea-coast than inland, but in Samar we met with it in the centre of the island at an elevation of 1500 feet.

In my opinion, *Pitta propinqua* of Sharpe is not a good species, though the late Mr. A. H. Everett supported Dr. Sharpe. In 'The Ibis' (1895, p. 29) Mr. Everett states that Balabac-Palawan birds, when compared with those from Luzon and Mindanao, have "the green tract on the backs of the former series forming a comparatively narrow band, whereas in the latter series it extends nearly to the rump. I have therefore no longer any doubt that *P. propinqua* differs sufficiently from *P. erythrogastra* to make it necessary that it should be separated." Mr. Grant, who also supports Dr. Sharpe (see Ibis, January 1896, p. 121), says, "It must, however, be stated that both forms were found by Mr. Whitehead in the island of Palawan," &c.

In the Philippines I obtained specimens from Luzon, Mindoro, Samar, and Negros. These birds often differ slightly in the amount of blue on chest and back, a specimen from Samar having less green on the back than any of my Palawan birds; but I fancy much of the difference is due to age, and more to the make of the skin. On examining

the Balabac specimen of *P. propinqua* in the British Museum, collected by Mr. Everett, the first glance justifies the correctness of his remarks on the narrowness of the green tract; but further examination shows that this narrowness is entirely due to the make of the skin, the green feathers on the shoulders having been drawn up into the neck, so that the green appears to be of less extent than in other specimens.

201. ПИТТА КОЧИ Brüggemann. (Grant, *Ibis*, 1895, p. 457.)

The rediscovery of this fine Pitta was one of the most interesting results of my journey to the highlands of North Luzon. In December 1894 we were collecting at 6000 feet, where much of the forest on the mountain-sides was pine, the ground below being quite open and covered with short grass. At first sight such country would seem to be no place for a Pitta, but here and there, in the deeper ravines, were thick patches, often of considerable extent, of evergreen oaks, with the ground below thickly covered with moss and an undergrowth of begonias and other plants. In these dark patches of forest my hunters told me they had seen a "Leuco" (which is the Tagalo name for a Pitta) with a bright red breast, but somehow they were always unfortunate, the Leuco being too quick for them. Nearly a month passed, and they were still unable to circumvent this supposed Leuco. Towards the beginning of January, 1896, I resolved to attack Monte Data, a great table-topped mountain, which I could plainly see from the Igorroti village of Bagnin in which we were living. In the wonderfully clear mountain atmosphere we could see not only that the summit of Data was drained by two considerable streams, which fell over the rocky precipitous side, but also that the mountain was well covered with thick oak-growth, with only a few patches of pine here and there.

After two days' hard work we reached the base of Monte Data, and the following morning I sent my boys to the summit to build the framework for our canvas-roofed house. When I had procured native porters on the following day,

I started at daylight for the ascent. It was, I remember, just 9 A.M. when we reached the summit; the frost was still glittering on the herbage in shady places, and I thought to myself that the country on all sides looked as if it might yield any kind of avifauna.

For some days nothing was seen of the new Leuco, until one afternoon, as I was strolling quietly through the thick oak-forest, a bird flew up from the path and disappeared into the dark forest. I caught sight of a bluish-grey object and by its shape I knew it to be a Pitta. On my return the same bird left the path again, but this time I marked its direction and followed quickly and quietly. I soon saw a large Pitta sitting on the branch of a fallen tree, which at once flew to the ground and commenced feeding. A shot from my small collecting-gun secured it—an immature *Pitta kochi*.

The Igorroties living on the top of Data knew the bird well by the name of "Kong Kong," and secured by snares all the rest of my specimens, my own hunters failing to shoot one during the six weeks spent at this camp.

Pitta kochi is probably confined to the highest mountains of North Luzon, at an elevation of over 6000 feet. It may, however, be met with in Mindoro, as in that island at high elevations the same oak-forest exists, and many of the birds are identical with those of Luzon. My expedition to Mindoro was almost a failure, owing to the incessant rains.

Iris dark brown; bill blackish brown, at the base of lower mandible slate-blue, inside of mouth white; legs slate-blue; nails white.

202. *PITTA ATRICAPILLA* Less. (Grant, Ibis, 1895, p. 121; 1896, pp. 121, 555; 1897, p. 240.)

The distribution of this bird seems to agree with that of *P. erythrogastra*, the two species inhabiting the same forests, both on the coast and on the lower slopes of the mountains inland. The feet of a male shot at Cape Engaño were dull pinkish white; they are generally pale greyish blue.

203. *PITTA STEERII* (Sharpe). (Grant, *Ibis*, 1897, p. 241.)

This *Pitta* (perhaps the most beautiful of the whole genus) was met with by us in the mountains of Central Samar. It delights in a country covered with huge forest, a fairly thick undergrowth, and the ground over which it hops a mass of moss-covered coral-limestone boulders, often of huge dimensions. The island of Gilolo, in which *Pitta maxima* is found, is, according to Dr. Wallace, of much the same formation. I myself was always ill in Samar, and was unable to do much outdoor work; but I once met with this *Pitta* in the forest, although so close that I was unable to shoot it. The young were fully fledged in June. This *Pitta* is called by the Bisayas of Samar "Babaqua," and is said to be more numerous from May to July in that island, so perhaps it is migratory. I doubt whether this species inhabits Leite, as the country traversed by us in that island was either a volcanic clay or covered with boulders of lava, no coral-limestone cropping out in the northern mountains.

Iris and bill black; feet light brown, pinkish at joints.

Juv. Claws, tip of bill, and gape orange.

204. *SARCOPHANOPS SAMARENSIS* Steere. (Grant, *Ibis*, 1897, p. 242.)

This curious bird is by no means common in Samar and Leite, to which islands its distribution is probably confined. It frequents thick forests, and the birds shot by us were feeding on berries.

The wonderful colouring of the soft parts was given by me in the '*Ibis*' for 1897, p. 242.

[To be continued.]

XV.—*Ushant as an Ornithological Station.*—*Notes on the Birds observed at Ushant, at Le Conquet on the west coast of Brittany, and at Alderney.* By WILLIAM EAGLE CLARKE, F.L.S.

WHEN studying the map of Western Europe in connection with the geographical aspect of bird-migration, I became impressed with the importance of the Island of Ushant as an